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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/027,751	12/21/2001	Joel P. Dunsmore	10004016-1	3808

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AGILENT TECHNOLOGIES, INC.  
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EXAMINER

BHAT, ADITYA S

ART UNIT PAPER NUMBER

2863

DATE MAILED: 04/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/027,751

Applicant(s)

DUNSMORE ET AL.

Examiner

Aditya S. Bhat

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 27-29 is/are rejected.
- 7) ☒ Claim(s) 4-15 and 30-32 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 27-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Marks (USPN 5,758,273).

Claims 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Marks (USPN 5,758,273)

With regards to claim 1, Marks (USPN 5,758,273) teaches a method of extending dynamic range of a test, system that has a receiver channel comprising:

compensating for an effect that compression (Col.1, lines 44-47) of the receiver channel has on as magnitude response and a phase response of the receiver channel. (Col. 2, lines 21-25) (see abstract)

With regards to claim 27, Marks (USPN 5,758,273) teaches test system having extended dynamic range comprising:

a receiver channel; (Col. 2, lines 21-25)

a controller that processes magnitude data and phase data generated by the receiver channel; (Col.4 lines 53-57) and

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a computer program stored in memory, the computer program being executed by the controller, the computer program implementing instructions that compensate for an effect on the generated data caused by the receiver channel being compressed.

Although, the Marks (USPN 5,758,273) does not appear to explicitly state a computer program implementing instructions that compensate for an effect on the generated data caused by the receiver channel being compressed.

Marks (USPN 5,758,273) teaches a processor to compensate for an effect on the generated data caused by the receiver channel being compressed. (Col. 4, lines 53-54). It would be inherent to this hardware system to use some sort of software program or instructions in order to carry out the task of compensating for an effect on the generated data caused by the receiver channel being compressed

With regards to claim 28, Marks (USPN 5,758,273) teaches a power limiter connected to an input of the receiver channel, wherein the instructions implemented by the computer program further compensate for an effect on the generated data caused by the limiter being compressed. (16; Col. 4, lines 52-54)

Claims 1 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Apostolos (USPN 5,079,735)

With regards to claim 1, Apostolos (USPN 5,079,735) teaches a method of extending dynamic range of a test, system that has a receiver channel comprising:

compensating for an effect that compression of the receiver channel has on as magnitude response and a phase response of the receiver channel. (Col. 6, lines 8-15)

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With regards to claim 27, Apostolos (USPN 5,079,735) teaches test system having extended dynamic range comprising:

a receiver channel; (10;Col. 3,lines 4-5)

a controller that processes magnitude data and phase data generated by the receiver channel; (figure 1) and

a computer program stored in memory, the computer program being executed by the controller, the computer program implementing instructions that compensate for an effect on the generated data caused by the receiver channel being compressed. Although, the Apostolos (USPN 5,079,735) does not appear to explicitly state a computer program implementing instructions that compensate for an effect on the generated data caused by the receiver channel being compressed. It does teach a memory and some processing, also it does teach compensating for an effect on the generated data caused by the receiver channel being compressed. (Col. 6, lines10-15) It would be inherent to this hardware system to use some sort of computer software in order to compensate for an effect on the generated data caused by the receiver channel being compressed. (Col. 5, lines 45-60)

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-3 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marks (USPN 5,758,273) in view of Bell et al . (USPN 5,491,548).

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With regards to claim 2, Marks (USPN 5,758,273) does not appear to teach correcting data measured for one of a device under test and a signal under test using the test system wherein the test system is one of network analyzer or a spectrum analyzer.

Bell et al . (USPN 5,491,548) teaches correcting data measured for one of a device under test and a signal under test using the test system wherein the test system is one of network analyzer or a spectrum analyzer.(Col. 8, lines 23-25)

It would've been obvious to one skilled in the art at the time of the invention to modify the Marks invention to include the spectrum analyzer taught by Bell et al . (USPN 5,491,548) to arrive at the claimed invention in order to accurately reproduce optical signals. (Col. 3, line 52)

***Allowable Subject Matter***

The following is a statement of reasons for the indication of allowable subject matter: Claims 4-15, and 30-32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 4, 16:

The primary reason for the allowance of claim 4 is the inclusion of the method steps of: characterizing a first receiver channel of the test system for a first magnitude compression response and a first phase compression response; characterizing a second receiver channel of the test system for a second magnitude compression response and a second phase compression response; and compensating magnitude and phase data for the compression responses of each of the channels, the magnitude and phase data being measured by the first channel and the second channel.

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It is this feature found in the claim, as it is claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes this claim allowable over the prior art.

The primary reason for the allowance of claim 16 is the inclusion of the method steps of: characterizing a second receiver channel of the test system for a second magnitude compression response and a second phase compression response. It is this feature found in the claim, as it is claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes this claim allowable over the prior art.

The primary reason for the allowance of claim 30 is the inclusion of the method steps of: another receiver channel; and a signal source; wherein the signal source generates a signal that is applied to the receiver channel, to an input of a device under test, and after passing through the device under test, to the other receiver channel, and wherein phase is measured as a phase difference between the receiver channels. It is this feature found in the claim, as it is claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes this claim allowable over the prior art.

Claims 5-16 are allowed due to their dependency on claim 4.

Claims 17-26 are allowed due to their dependency on claim 16.

Claims 31-32 are allowed due to their dependency on claim 30.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Response to Arguments***

Applicant's arguments with respect to claims 1-32 have been considered but are not persuasive.

Applicant is reminded that during patent examination, the pending claims must be "given the broadest reasonable interpretation consistent with the specification." Applicant always has the opportunity to amend the claims during prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969).

While the meaning of claims of issued patents are interpreted in light of the specification, prosecution history, prior art and other claims, this is not the mode of claim interpretation to be applied during examination. During examination, the claims must be interpreted as broadly as their terms reasonably allowed. This means that the words of the claim must be given their plain meaning unless applicant has provided a clear definition in the specification. In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989).

Applicant argues that the prior art of record (Marks/Apostolos) does not disclose the claimed invention.

With regards to the Marks reference applicant argues that the Marks reference does not disclose a method of extending dynamic range (col.1-2 ,lines 67-1) (see title) of a test system that has a receiver channel (Col.2, lines 22-25), a test system having an extended dynamic range (see title), compensating for an effect that compression of



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the receiver channel has on a magnitude response and a phase response of the receiver channel (Col.2, Lines 22-25), compensating for an effect that compression (col.2, lines 22-25) of the receiver channel may have on either magnitude or phase response (Col.1, Lines44-47), a controller that processes the magnitude and phase data, or a computer program that compensates for an effect n the generated data caused by the receiver channel being compressed (Col.4, Lines 55-57), (It would be within reasonable interpretation for one of ordinary skill in the art to conclude that the processor is running a program or has some sort of instructions in order to perform a desired function.) and that the attenuator disclosed by Marks is not equivalent to the power limiter disclose in the pending application. According to the Merriam -Webster online dictionary the definition of attenuate is to lessen the amount, force, magnitude, or value of: weaken. In the cited reference the attenuator is used to limit the signal strength (col. 2, lines 58-60). Although one skilled in the art would recognize that the terms are synonymous the cited portion is used to illustrate that the component in the pending application as well as the prior art are performing the same function.

Applicant argues that no mention has been made regarding the magnitude and phase response. Applicant is directed to the background art portion of applicant's patent application publication 2003/0125894 Page 1, Paragraph 005. This portion defines the term compression point. The above portion cited recites, "a point eventually will be reached where the magnitude and/or phase response is no longer constant as signal power increases. This point is known as at the compression point". Although this portion is not relied upon in the rejection it is merely being used to point out that the term .

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"compression point" could encompass the magnitude and/or phase as admitted by the applicant. For this reason applicant's argument regarding the magnitude and phase are not persuasive.

With regards to the Apostolos reference, applicant argues that the cited reference fails to disclose compensating for an effect that compression of the receiver channel has on a magnitude response and a phase response of the receiver channel. (Col. 6, Lines 8-15)

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation can be found in Bell see col. 3 line 52.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hsiung et al. (USPN 4,933,641) teaches extended dynamic range logarithmic amplifying apparatus and method, Johnson et al. (USPN 6,252,536) teaches a dynamic range extender apparatus, system and method for digital image receiver, and Kim (USPN 5,978,665) teaches a receiver for extending the dynamic range of a received signal strength indicator.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aditya S Bhat whose telephone number is 703-308-0332. The examiner can normally be reached on M-F 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on 703-308-3126. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-5841 for regular communications and 703-308-5841 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Aditya Bhat  
March 31, 2006

**BRYAN BUI**  
**PRIMARY EXAMINER**

